

ANALISIS PENGENDALIAN KUALITAS PRODUK *HANDREM PS125 HT* MENGGUNAKAN METODE *STATISTICAL QUALITY CONTROL (SQC)* DAN *FAULT TREE ANALYSIS (FTA)* PADA PT PUTRA SULUNG MAKMUR METAL CASTINDO

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ABSTRAK

Tujuan penelitian ini adalah untuk menganalisis penyebab dari masalah cacat produk *Handrem PS125 HT* dengan menggunakan alat pengendalian kualitas menggunakan metode *Statistical Quality control (SQC)* dan metode *Fault tree Analysis (FTA)* digunakan sebagai konsep pemikiran yang mendorong untuk mengurangi cacat dengan mencari dan menganalisis akar penyebab permasalahan yang ada sehingga dapat dicari solusi pencegahannya. Data pengamatan menunjukkan, masih terdapat yang mengalami *reject* sebesar 7% cacat yang melebihi standart cacat perusahaan yaitu 5% yang disebabkan oleh adanya penyimpangan proses pada saat produksi. Dari hasil analisis menggunakan alat pengendalian kualitas didapatkan hasil pada jenis jenis cacat yaitu persentase kerusakan dari jenis *defect Miss Match* dengan jumlah cacat sebanyak 29 unit dengan persentase cacat sebesar 28%, *Sand Inclusion* dengan jumlah cacat sebanyak 28 unit dengan persentase cacat sebesar 27%, *Cold Shut* dengan jumlah cacat sebanyak 24 unit dengan persentase cacat sebesar 23%, dan *Gas Hole* dengan jumlah cacat sebanyak 22 unit dengan persentase cacat sebesar 21%, grafik *p-chart* dari setiap jenis cacat tidak ada yang melewati *Upper Control Limit (UCL)* ataupun melewati *Lower Control Limit (LCL)* dan hasil diagram *fishbone* didapatkan terdapat 4 faktor yang menyebabkan terjadinya cacat produk yaitu manusia atau pekerja, material, metode, dan lingkungan. Integrasi pada *Fault Tree Analysis (FTA)* yang didapatkan yaitu perbaikan pada prosedur SOP saat proses produksi berlangsung. Integrasi dengan *Statistical Quality Control* dan *Fault Tree Analysis* secara umum mampu membantu menganalisis dan mengetahui pemecahan permasalahan kualitas sampai pada akar permasalahannya

Kata Kunci: Pengendalian Kualitas, *Statistical Quality Control (SQC)*, *Fault Tree Analysis (FTA)*, *P-chart*, *Fishbone Diagram*

ANALYSIS OF PRODUCT QUALITY CONTROL OF HANDREM PS125 HT USING STATISTICAL QUALITY CONTROL (SQC) AND FAULT TREE ANALYSIS (FTA) METHODS AT PT PUTRA SULUNG MAKMUR METAL CASTINDO

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ABSTRACT

The purpose of this study was to analyze the causes of the Handrem PS125 HT product defect problem by using quality control tools using the Statistical Quality Control (SQC) method and the Fault Tree Analysis (FTA) method, used as a concept of thinking that encourages reducing defects by finding and analyzing the root causes of existing problems so that preventive solutions can be found. Observational data shows that there are still those who experience rejects of 7% for defects that exceed the company's standard defects of 5% caused by process irregularities during production. From the results of the analysis using quality control tools, the results obtained for the types of defects, namely the percentage of damage from the Miss Match type defect with a total of 29 units of defects with a defect percentage of 28%, Sand Inclusion with 28 units of defects with a defect percentage of 27%, Cold Shut with 24 units of defects with a 23% percentage of defects, and Gas Hole with 22 units of defects with a defects percentage of 21%, p-chart graph of each type of defect does not pass the Upper Control Limit (UCL) or pass the Lower Control Limit (LCL), and the results of the fishbone diagram show that there are 4 factors that cause product defects which are humans or workers, materials, methods, and the environment. Integration of the Fault Tree Analysis (FTA) obtained is an improvement in the SOP procedure during the production process. Integration with Statistical Quality Control and Fault Tree Analysis in general is able to help analyze and identify solutions to quality problems down to the root of the problem.

Keywords: *Quality Control, Statistical Quality Control (SQC), Fault Tree Analysis (FTA), P-chart, Fishbone Diagram*

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